

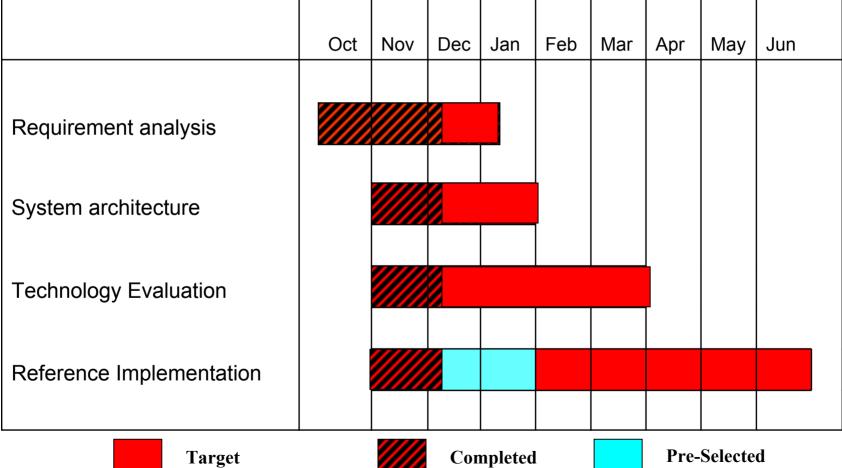
caGRID Team Mission: "Define the caBIG system architecture that satisfies the requirements of the caBIG Community"

December 10, 2004





## **High-Level – Time Line**









## caGRID Process

#### For each workspace (ICR,C-CDE, TBPT, CTMS:

- -Identify Software feature list.
- -Identify actors and use case
- -Develop Use case diagrams

### **Non-functional requirements**

- -caBIG standards.
- -Categories

### **SIG Recommendations**

- -Identifiers.
- -Workflows.
- -Query languages.
- -Identity.

### **Integrated analysis:**

- -Create integrated high level use case view.
- -Develop integrated use case diagram.
- -Develop use case specifications.
- -Testing and feedback from caBIG.

<u>Technology testing</u>

& Research.

### caGRID Architecture:

- -Identify architecture views.
- -Develop caGRID architecture.
- -Prioritized use case to define implementation phases.

### **Technology**:

- -Evaluation.
- -Map models with technologies.
- -Develop technology view.

## **Design and development:**

- -Design and develop framework.
- -Reference implementation.
- -Documentation.





Informatics

# Requirement analysis – Iteration II

Use Case Package	Use cases	Actors
Advertise	Advertise, Advertise Data Source, Advertise Analytical Tool	caGrid Resource, Advertiser
Discovery	Discovery, Discovery Service, Discovery Annotation, Discovery Schema, Enforce Security Policy.	Researcher, caGrid User, caGrid Resource
Query/Update	Query, Validate Query Against Security Policy, Query Federated Data Source, Transform Query Results, Deliver Query Results – Advertise, Resolve Semantics, Resolve Data – ResolveID, Notify Of Query Status.	Researcher, Subscribed User (Notification), Data Source, Metadata Repository
Workflows	**Work in progress**	**Work in progress**
Support services	Transfer Data, Negotiate Security Policy, Request resources, Discover Data Sinks.	Data Sink, Data Source, caGrid User, Invocation
Invocation	Execution, SupplySecurityCredentials, Application Creation and Deployment	Researcher, Analytical Tool
Administration	Startup Grid Service, Shutdown Grid Service, Update Data Schema, Security Administration, Instantiate Notification	System Administrator, caGrid Resource, Metadata Repository, caGrid User, Subscribed User





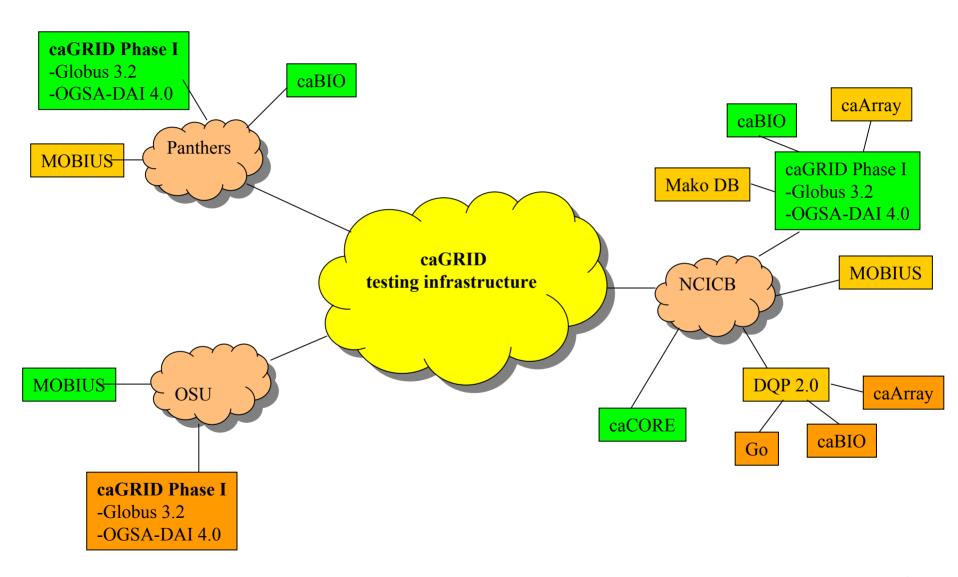
# Candidate technologies identified so far ...

Grid Middleware	Globus 3.2, Globus 4.0
	Web Services
Data Grid Middleware	OGSA-DAI 4.0, OGSA-DAI 5.0
	DQP 2.0
	Mobius (GME, Mako, DTS)
Semantic	Some of myGrid components.
	Jena, RDF, OWL.
	caCore
Query Language	OQL
	Xpath/xquery
	Rdfql
	caGRID phase I
Security	Globus
	OGSA-DAI
	Shibboleth
Unique identifiers	GUID, LSID
caCORE	caBIO 3.0
caGRID	caGRID Phase I.





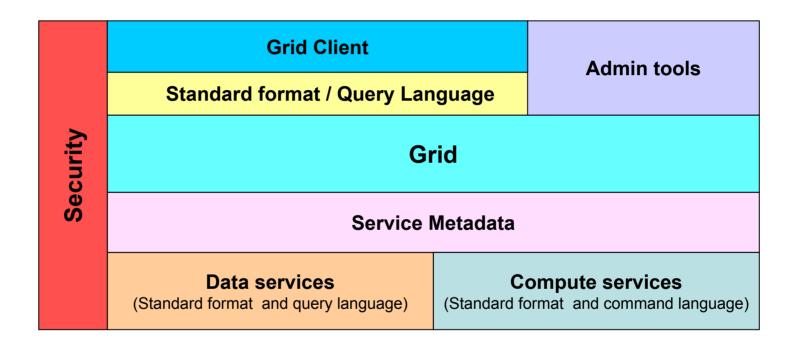
# **Current caGRID Testing Infrastructure today**







## caGRID Architecture – First iteration (Draft)







## **Accomplishments**

- Requirement gathering from workspaces completed
- First integration iteration completed
- ✓ First use case specification iteration completed
- ✓ caGRID code migrated to Globus 3.2 and OGSA-DAI 4.0
- √ caGRID phase I installed in 3 sites (6 servers)
- ✓ MOBIUS install in 3 sites
- ✓ DQP installed Testing with local data repositories
- ✓ caArray, caBIO, Go, EVS RDBMS as OGSA-DAI data sources.
- ✓ Fist iteration of caGRID architecture completed
- ✓ First caGRID Team face to face meeting





## **Short term actions**

- Test MOBIUS OGSA-DAI integration.
- Complete DQP testing
- Test OGSA-DAI 5.0 and Globus 4.0
- Complete caArray integration testing into caGRID phase I infrastructure
- Complete use case specifications
- Present use case analysis results to Architecture workspace
- Develop second caGRID system architecture iteration
- Test Globus / OGSA-DAI Security
- Plan semantic integration testing
- Complete non-functional requirements
- Develop test cases for technology evaluation
- Test analysis tools in Globus / Web service frameworks
- Continue having fun!!!







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